WHAT IS CLAIMED IS:

1. An isolated polynucleotide comprising a polynucleotide selected from the group consisting of:

(a) a polynucleotide having the nucleotide sequence of SEQ ID NO: 1, 12 or 14;

(b) a polynucleotide having the nucleotide sequence of the cDNA insert of clone pIL-1Hy2 (ATCC Accession No. PTA-96);

(c) a polynucleotide having the IL-1Hy2 protein coding nucleotide sequence of a polynucleotide of (a) or (b);

(d) a polynucleotide having the mature protein coding sequence of SEQ ID NOS: 1, 12 or 14.

2. An isolated polynucleotide encoding a polypeptide with IL-1 Hy2 activity, comprising a polynucleotide selected from the group consisting of:

(a) polynucleotides that encode the amino acid sequence of SEQ ID NO: 2;

(b) polynucleotides that encode the amino acid sequence of SEQ ID NO: 13 and

(c) polynucleotides that encode the protein encoded by the cDNA insert of clone pIL-1Hy2;

(d) polynucleotides that encode the mature amino acid sequence of SEQ ID NOS: 2 or 13.

3. An isolated polynucleotide encoding a polypeptide with IL-1 Hy2 activity that hybridizes under stringent conditions to the complement of a polynucleotide of any one of claims 1 or 2.

4. The polynucleotide of any one of claims 1 through 3 which is a DNA.

5. The polynucleotide of claim 3 which is an allelic variant.

6. The polynucleotide of claim 5 which is selected from the group consisting of polynucleotides having the IL-1Hy2 protein coding sequence of SEQ ID NO: 1 and comprising one or more of the following nucleotide changes: T125C, C184T and A205C.

7. An isolated polynucleotide which comprises a complement of the polynucleotide of Claim 1.

8. An expression vector comprising the DNA of Claim 4.

9. A host cell genetically engineered to contain the DNA of Claim 4.

10. A host cell genetically engineered to contain the DNA of Claim 4 in operative association with a regulatory sequence that controls expression of the DNA in the host cell.

11. An isolated polypeptide with IL-1 Hy2 activity comprising:
(a) the IL-1 Hy2 protein sequence of SEQ ID NOS: 2 or 13; or
(b) an amino acid sequence encoded by the cDNA insert of clone pIL-1Hy2 (ATCC Accession No. PTA-96); or
(c) a mature protein sequence of SEQ ID NOS: 2 or 13; or
(d) a polypeptide encoded by the polynucleotide of claim 3; or
(e) a polypeptide having an amino acid sequence 90% identical to the sequence of (a), (b), or (c).

12. A composition comprising the polypeptide of Claim 11 and a carrier.

13. An antibody directed against the polypeptide of Claim 11.

14. A method for detecting a polynucleotide of Claim 1 in a sample, comprising the steps of:

a) contacting the sample with a compound that binds to and forms a complex with the polynucleotide for a period sufficient to form the complex; and

b) detecting the complex, so that if a complex is detected, a polynucleotide of Claim 1 is detected.

15. A method for detecting a polynucleotide of Claim 1 in a sample, comprising the steps of:

a) contacting the sample under stringent hybridization conditions with nucleic acid primers that anneal to a polynucleotide of Claim 1 under such conditions; and

b) amplifying the polynucleotides of Claim 1 so that if a polynucleotide is amplified, a polynucleotide of Claim 1 is detected.

16. The method of Claim 15, wherein the polynucleotide is an RNA molecule that encodes a polypeptide of Claim 11, and the method further comprises reverse transcribing an annealed RNA molecule into a cDNA polynucleotide.

17. A method for detecting a polypeptide of Claim 11 in a sample, comprising:

a) contacting the sample with a compound that binds to and forms a complex with the polypeptide for a period sufficient to form the complex; and

b) detecting the complex, so that if a complex is detected, a polypeptide of Claim 11 is detected.

18. A method for identifying a compound that binds to a polypeptide of Claim 11, comprising:

a) contacting a compound with a polypeptide of Claim 11 for a time sufficient to form a polypeptide/compound complex; and

b) detecting the complex, so that if a polypeptide/compound complex is detected, a compound that binds to a polypeptide of Claim 11 is identified.

19. A method for identifying a compound that binds to a polypeptide of Claim 11, comprising:

a) contacting a compound with a polypeptide of Claim 11, in a cell, for a time sufficient to form a polypeptide/compound complex, wherein the complex drives expression of a reporter gene sequence in the cell; and

b) detecting the complex by detecting reporter gene sequence expression, so that if a polypeptide/compound complex is detected, a compound that binds to a polypeptide of Claim 11 is identified.

20. A method of producing the polypeptide of Claim 11, comprising,

a) culturing the host cell of claim 9 for a period of time sufficient to express the polypeptide contained within said cell; and

b) isolating the polypeptide from the cell of step 1.

21. A polypeptide according to Claim 11 capable of binding to Interleukin-1 Receptor.

22. A polypeptide according to Claim 11 which is an antagonist of Interleukin-1 Receptor.

23. A method of modulating the biological activity of an Interleukin-1 Receptor comprising contacting the receptor with the polypeptide of Claim 11.

24. The polypeptide of Claim 11 coupled to a label.

25. A method of labeling an Interleukin-1 (IL-1) receptor comprising contacting said IL-1 receptor with a labeled polypeptide of claim 24.

26. A kit comprising the polypeptide of Claim 11.

27. A collection of polynucleotides, the collection comprising the sequence information of at least one of SEQ ID NOS: 1, 12 or 14 or fragments thereof.

28. The collection of claim 27, wherein the collection is provided on a nucleic acid array.

29. The collection of claim 27, wherein the collection is provided in a computer-readable format.

30. A method of treatment for cancer involving elevated levels of IL-1 comprising the step of:

administering to a patient in need thereof an amount of IL-1 Hy2 effective to ameliorate symptoms of said cancer.

31. The method of claim 30 wherein the cancer is selected from the group consisting of breast adenocarcinoma, brain tumors, melanoma, myeloma, giant cell tumors of bone, acute myelogenous leukemia, oral epidermoid carcinoma and squamous cell carcinoma.

32. A method of treating an inflammatory disease state mediated by IL-18 comprising administering to a subject in need thereof an amount of an IL-1 Hy2 polypeptide of claim 11 effective to inhibit IL-18 activity.